

ABSTRACT

A precoder for an optical duo-binary transmission apparatus disposing the precoder before a time division multiplexer includes a judgment unit for judging whether

5 an odd number or even number of '1's exist in data input signals of N channels inputted at an n^{th} time of channel input. Further included in the precoder is a toggle unit for toggling an output signal of the judgment unit when the judgment is odd, and for determining an output value for one of the channels. The precoder also has an output unit for determining output values of other channels according to a respective data input signal and a

10 predetermined channel from among the N channels.